

STAYNRED
AN
ALMANACK

For the yeare of our
Redemption. 1648.

Being Bisflextile or Leape-yeare.

Referred to the Famous City of
BRISTOLL whose Longitude
is 19 deg. 10 min. and Latitude by
exact observation 51 deg.
28. minutes.

BY PHILIP STAYNRED.

*Perspicuum sit erga servos tuos opus tuum &
decor tuus in filiis eorum. Psal. 90. verse 16.*

LONDON,

Printed by William Wilson, for the
Company of STATIONERS.

1648.

MOVABLE FEASTS FOR

The Iulian or } 1648. { The GREGORIAN
English accompt. } or Roman accompt.

A		The Dominicall letter	E D
	5	The Circle of the Sunne	5
	19	The Golden Number	19
	15	The Epact.	5
	1	The Roman Indiction	1
February	13	Shrove Sunday	23 February
Aprill	2	Easter day	12 Aprill
May	11	Ascension day	21 May
May	21	Whitsunday	31 May
December	3	Advent Sunday	29 Novemb

MOVABLE FEASTS FOR

The Iulian or } 1649 { The GREGORIAN
English accompt. } or Roman accompt.

A		The Dominicall letter	C
	6	The Circle of the Sunne	6
	10	The Golden number	10
	26	The Epact.	16
	2	The Roman Indiction	2
February	4	Shrove Sunday	February 1
March	25	Easter day	Aprill
May	3	Ascension day	May 13
May	13	Whitsunday	May 23
December	2	Advent Sunday	November 2

KING CHARLES began his reigne the 27 of
March, 1625. and hath reigned 23. yeares
complete the 26. of March this yeare 1648.
but the 27 wee write Anno Regni. 24. THE

THE

Anatomy of Mans body, as the parts thereof are governed by the 12. Celestiall Signes.

♈ Aries, Head and Face.



♓ Pisces, the feet.

♊ Armes and Shoulders.

♋ Heart and Back.

♌ Rains and Loynes.

♍ Thighes.

♎ Leggs.

The Characters of the seven Planets and their Aspects.

♄ Saturne, ♃ Jupiter, ♂ Mars, ☉ the Sunne, ♀ Uenus, ☿ Metcury, ☾ the Moone increasing, ☾ decreasing.

☿ Coniunction, ☿ Opposition, ☿ Quartile, ☿ Trine, ☿ Sextile, ☿ Caput draconis, ☿ Cauda draconis.

The vse of the ALMANACK.

In the head of the Almanack, I have set Change, Full, and Quarters of the Moone (*viz.*) & the conjunction (☽) the first quartile of ☽ with ☉.

In the first and second Columnnes are the Arithmeticall numbers for the daies of the Moneth, and Litterall numbers for the weeke daies.

In the fourth Columnne I have placed the Sunnes Declination from the Equator: as the first day of *January* you shall find 21 degr. 52 min.

In the fifth Columnne you have the Semidurnal Arke (or the time of Sun-setting) As the first day of *January*, you shall finde 3 houres 59 minuts, which being substracted from 12 houres, there remains 8 houres and 1 minute for the time of Sun-rising. By this Columnne you may know whether the Sunnes Declination be North or South, for if the time of the Sunnes setting against the Declination, bee more then 6 houres, then hath North Declination, if lesse then 6 houres, it hath South declination.

In the Sixt Columnne you have the Degrees of the Moone in the Zodiack.

In the Seventh Columnne are the Shapes of the Moone in the time of her Change, Full, and Quarters, with the Perigeon and Apogee on.

In the Eighth Colume is the age of the Moone, or the number of daies after her ☽ Conjunction.

In the Ninth and Tenth is the Roman accempt.

Note that (a) stands for Ante, before noone and (p) for Post, afternoone.

January

January hath xxxj. dayes.

(Laſt quarter the 7 day 38 min. paſt 4 in the morning.
 New moone the 14 day 11 min. paſt 6 in the aftern.
 Firſt quarter the 22 day 38 min. paſt 10 in the aftern.
 Full moone the 29 day 1 quarter before midnight.

1	New yeares	11	52	3	59	eo	4	17	d	11
2	☐ h c 11 p	21	42	4	0		15	18	f	12
3	c ☉ 24 c 9 p	21	32	4	1	virgo	2	19	f	13
4	d ☐ 2 c 3 a	21	22	4	3		19	20	g	14
5	e ☐ 2 c 9 p	21	11	4	4	libra	3	21	a	15
6	f twelſe day	21	0	4	5		17	22	b	16
7	g Lucian	20	48	4	7	ſcorp	1	23	c	17
8	* 24 c 1 a	20	36	4	8		15	24	d	18
9	☐ h c 10 p	20	23	4	10		28	25	e	19
10	c ☐ 2 c 10 p	20	11	4	11	ſagit	11	26	f	20
11	d vac. cur.	19	57	4	12		24	27	g	21
12	e ☉ 2 c 3 p	19	43	4	14	capri	7	28	a	22
13	f Hilarie	19	29	4	15		19	29	b	23
14	g ☉ 2 c 7 p	19	15	4	17	aqua	1	30	c	24
15	a vac. curſ.	19	0	4	18		14	1	a	25
16	☐ h c 10 p	18	45	4	20		26	2	e	26
17	c ☐ h c noone	18	30	4	21	piſces	8	3	f	27
18	d Priſca	18	14	4	23		20	4	g	28
19	e * h c 1 a	17	58	4	24	aries	1	5	a	29
20	f Fabian	17	41	4	2		13	6	b	30
21	g Agnes	17	25	4	28		25	7	c	31
22	a Vincent	17	8	4	30	taurus	2	8	d	
23	☐ h c 10 p	16	50	4	31		2	9	e	
24	c ☐ h c 10 p	16	33	4	33	gem	2	10	f	
25	d Conſ. of Paul.	16	15	1	35		16	11	g	
26	e ☉ 2 c 2 p	15	57	1	37		29	12	a	
27	f vac. cur.	15	38	1	39	tanc	13	13	b	
28	g * h c 7 a	15	20	1	40		28	14	c	
29	a ☐ h c 10 p	15	1	1	42	eo	12	15	d	
30	☐ h c 10 p	14	42	1	43		27	16	e	
31	c ☉ 2 c 2 a	14	22	1	45	ring	13	17	f	

February hath xxix. dayes.

☾ Last quarter the 5 day 1 quarter past 3 afternoone.
 ● New moonethe 13 day 37 minuts past noone.
 ☽ First quarter the 21 day 41 minuts past 2 afternoone.
 ● Full Moone the 28 day 21 minuts past 9 in the morn.

1	d	☾ 9 a	14	24	47	virg 18	18	g	1	d
2	e	Portification.	13	42	49	libr 13	19	a	2	e
3	f	Blz fij	13	22	50	27	20	b	3	f
4	g	* 2 3 a	13	24	52	scor 11	21	c	4	g
5	h	Agatha. Vir.	12	41	54	25	22	d	5	h
6	i	Sevagefima	12	21	55	sagit 8	23	e	6	i
7	c	* 8 4 p	12	04	58	21	24	f	7	c
8	d	☽ 2 2 p	11	38	59	capr 4	25	g	8	d
9	e	☽ 1 1 a	11	17	51	16	26	a	9	e
10	f	☽ 6 a	10	56	53	28	27	b	10	f
11	g	☾ vac. cur	10	34	57	aqua 10	28	c	11	g
12	a	Term Ends	10	12	59	22	29	d	12	a
13	b	Throve-hin	9	50	511	pisc 4	30	e	13	b
14	c	Valentine	9	28	513	15	1	f	14	c
15	d	* 9 a	9	6	515	28	2	g	15	d
16	e	☽ 1 a	8	43	517	aries 10	3	a	16	e
17	f	☽ 3 p	8	21	519	22	4	b	17	f
18	g	☽ 2 p	7	58	521	taur 4	5	c	18	g
19	a	* 1 a	7	35	523	16	6	d	19	a
20	b	☽ 1 a	7	12	525	29	7	e	20	b
21	c	☽ 1 a	5	49	527	gem 11	8	f	21	c
22	d	☾ vac. cur.	5	26	529	24	9	g	22	d
23	e	☽ 3 a	5	3	531	canc 8	10	a	23	e
24	f	* 7 p	5	40	533	22	11	b	24	f
25	g	☽ 7 p	5	17	535	leo 6	12	c	25	g
26	a	☽ 9 p	4	53	538	21	13	d	26	a
27	b	☽ 9 p	4	30	539	virg 6	14	e	27	b
28	c	☽ 9 p	4	6	540	21	15	f	28	c
29	d	☽ noon	3	42	541	libr 6	16	g	29	d
Engl. Remarkable			Sunns	Sun	fgne &					
accopdaies & aspects			declin	Set	de. of ☾					

March hath xxxj. dayes.

(Last quarter the 5 day 5 min. past 4. in the morning.
 New moon the 14 day 27 min. past 6 in the morning.
 First quarter the 22 day 48 min. past 2 in the morning
 Full moone the 28 day at 5 a clocke at night.

18	d	DAVID	3	19	5	43	libra	22	17	B	11
19	e	Colde	2	36	5	45	scorp	6	18	B	12
20	f	* h 5 p	2	32	5	47	21		19	B	13
21	g	h 1 a	2	8	5	49	sagit.	4	20	S	14
22	A	Stur. in leat	1	45	5	51	18		21	D	15
23	b	Δ 4 3 p	1	21	5	53	capri.	1	22	B	16
24	e	Perpetue	0	57	5	55	13		23	E	17
25	b	Δ h 3 q	0	34	5	57	26		24	B	18
26	e	vac. cur.	fou. 10	5	59	aqua	8		25	B	19
27	f	6 5 6 a	nor. 14	6	1	20			26	B	20
28	g	6 4 6 noone	0	38	6	3	pises	1	27	L	21
29	A	Stur. in leat	1	16	5	13			28	D	22
30	b	Gregorij.	1	25	6	7	25		29	B	23
1	e	6 0 7 a	1	48	6	9	aries	7	30	F	24
2	b	6 5 11 a	2	12	6	11	19		1	A	25
3	e	Δ 4 1 p	2	35	6	13	taurus	7	2	a	26
4	f	vac. cur.	2	59	6	15	14		3	B	27
5	g	Edward	3	23	6	17	26		4	E	28
6	A	Stur. in leat	3	46	6	19	gem	8	5	D	29
7	b	□ 5 12 mo	4	9	6	21	21		6	B	30
8	e	Benedict.	4	32	6	23	can	4	7	F	31
9	b	□ D 3 a	4	55	6	25	17		8	A	1
10	e	* h 9 a	5	18	6	27	leo	1	9	a	2
11	f	Δ D 11 a	5	41	6	29	15		10	B	3
12	g	Ann. Mary.	6	4	6	31	29		11	E	4
13	A	Palme Stur.	6	27	6	33	virg	14	12	a	5
14	b	Init. rep. cur.	6	49	6	34	29		13	E	6
15	e	6 0 6 p	7	12	6	36	libra	15	14	E	7
16	f	* 0 1 p	7	34	6	38	30		15	B	8
17	g	6 5 4 a	7	56	6	39	scor	14	16	B	9
18	A	6 h 3 p.	8	19	6	42	29		17	B	10

April hath xxx. dayes.

- Last quarter the 4 day 52 min. past 6 in the aftern.
 New moone the 12 day 32 min. past 10 afternoone.
 First quarter the 20. day 22 min. past 11 in the mor.
 Full moone the 27 day 32 min. past 2 in the morning

1	g	□	h	4	9	An	8	406	44	sagit	13	18	f	11
2	A	Easter d					9	26	46		26	19	E	12
3	b	Richard					9	246	48	capri	9	20	e	13
4	c	Ambrose					9	466	50		22	21	f	14
5	d	*♂	♂	5	a		10	76	52	aquar	4	22	g	15
6	e	□	♀	♂	10a		10	286	55		16	23	a	16
7	f	♂	4	♂	2p		10	496	56		28	24	b	17
8	g	*♀	♀	♂	10p		11	106	57	pisc	10	25	c	18
9	A	Low Sunday					11	316	59		22	26	d	19
10	b	*♂	♂	6	a		11	517	1	arie	4	27	e	20
11	c	♂	♂	♂	7a		12	117	3		10	28	f	21
12	d	♂	4	♂	3p		12	317	6		28	29	g	22
13	e	♂	♀	♂	10p		12	517	8	taur	10	1	a	23
14	f	*♀	♀	♂	midn.		13	107	10		23	2	b	24
15	g	♂	h	♂	8a		13	307	12	gem	5	3	M	25
16	A	2 Sun. aft. Eas					13	507	13		18	4	n	26
17	b	*♂	♂	♂	noone		14	97	14	can	1	5	e	27
18	c	□	♂	♂	11p		14	277	15		14	6	f	28
19	d	Terme begin					14	467	17		27	7	g	29
20	e	♂	♀	♂	1a		15	47	19	leo	11	8	a	30
21	f	♂	4	♂	8p		15	227	20		25	9	M	31
22	g	□	h	♂	morn		15	407	22	virg	9	10	c	2
23	A	2 Sun. aft. Eas					15	587	23		24	11	d	3
24	b	♂	♀	♂	1p		16	157	25	libra	8	12	e	4
25	c	♂	♂	♂			16	327	26		23	13	f	5
26	d	♂	♀	♂	7a		16	497	28	scorp	8	14	g	6
27	e	Anacarius					17	57	30		23	15	a	7
28	f	♂	h	♂	7a		17	217	31	sagit	7	16	b	8
29	g	♂	♀	♂	3a		17	377	33		21	17	c	9
30	A	4 Sun. aft. Eas					17	537	35	capr	4	18	d	10

May hath xxxj. dayes.

(Last quarter the 4 day at 11 a clock in the morning.
 New moone the 12 day 35 min. past 5. in the aftern.
 First quarter the 19 day 11 min. past 5 afternoone.
 Full moone the 26 day a quarter before noone.

1	b	Philip & Jac	18	8	7	32	capr	17	19	e	11
2	c	☐♂☾ noone	18	23	7	39	aqua	0	20	f	12
3	d	Inven. cro. te.	18	38	7	40		12	21	g	13
4	e	*♀☾ 5 a	18	52	7	42		25	22	a	14
5	f	☐♂☾ 7 a	19	6	7	43	pisces	6	23	b	15
6	g	John port. lat.	19	20	7	45		18	24	c	16
7	a	Regat on sun	19	34	7	46	arie	0	25	R	og
8	b	☐ vac. cur.	19	47	7	48		12	26	e	18
9	c	♂♀☾ 5 p	20	0	7	49		24	27	f	19
10	d	♂♂☾ 9 a	20	12	7	50	taurus	6	28	g	20
11	e	Ascension day	20	24	7	51		19	29	a	ce
12	f	♂♂☾ 7 p	20	36	7	53	gem	1	30	b	22
13	g	☐ vac. cur.	20	47	7	54		14	1	c	23
14	a	☐♂☾ East	20	58	7	55		27	2	d	24
15	b	Term ends.	21	9	7	56	canc	11	3	e	25
16	c	♂♂☾ 5 p	21	19	7	57		24	4	f	26
17	d	☐♂☾ 7 p	21	29	7	59	leo	8	5	g	27
18	e	☐♀☾ morn	21	39	8	0		22	6	a	28
19	f	Dunstane	21	48	8	1	virgo	5	7	b	29
20	g	Δ♂☾ 10 a	21	57	8	2		20	8	c	30
21	a	Whit Sunday	22	5	8	3	libra	4	9	w	hit
22	b	☐ vac. cur.	22	13	8	3		18	10	h	ne
23	c	*♂♀☾ 9 a	22	21	8	4	scorp	3	11	f	2
24	d	♂♂♀☾ 9 a	22	28	8	5		17	12	g	3
25	e	♂♂☾ 9 p	22	35	8	6	sagit	1	13	a	4
26	f	Augustine	22	42	8	7		15	14	b	5
27	g	Δ♂☾ 7 a	22	48	8	7		20	15	c	6
28	a	Trinity sund	22	54	8	8	capri	2	16	T	in
29	b	Δ♂☾ 2 a	22	59	8	9		25	17	e	8
30	c	Δ♂☾ 1 p	23	4	8	9	aqua	8	18	f	9
31	d	☐♂☾ 2 p	23	9	8	10		20	19	g	10

June hath xxx. dayes.

Last quarter the 3 day 7 min. past 4 in the morning.
 New moon the 10 day 21 min. in the morning.
 First quarter the 17 day 50 min. past 9 in the afternoon.
 Full moone the 24 day at 11 a clock afternoone.

1	e	Δ 4 1 p	23	15	8	10	pisces	3	20	a	1	g
2	f	Terme begin	23	16	8	10		15	21	b	2	a
3	g	Nichonede	23	20	8	11		26	22	c	3	b
4	A	1 Sun. af. Trin	23	23	8	11	aries	8	23	d	4	c
5	b	Boniface	23	25	8	11		20	24	e	5	d
6	e	Δ 4 1 p	23	27	8	11	taurus	2	25	f	6	e
7	d	vac. cur.	23	29	8	12		14	26	g	7	f
8	e	Δ 3 11 a	23	30	8	12		17	27	a	8	g
9	f	Δ h 10 a	23	31	8	12	gem	10	28	b	9	a
10	g	Barnaby ever	22	31	8	12		23	29	c	10	b
11	A	2 Sun. af. Tri	tropic	canc.	cancer	6			1	d	11	c
12	b	vac. cur.	23	31	8	12		20	2	e	12	d
13	c	Δ h 4 p	23	30	8	12	leo	4	3	f	13	e
14	d	vac. cur.	23	29	8	12		18	4	g	14	f
15	e	Δ 4 5 p	23	27	8	12	virgo	2	5	a	15	g
16	f	Δ h 2 a	23	25	8	11		16	6	b	16	a
17	g	Δ 3 4 p	23	23	8	11	libra	1	7	c	17	b
18	A	3 Sun. af. Tri	23	20	8	11		15	8	d	18	c
19	b	Edward	23	17	8	11		19	9	e	19	d
20	c	Δ 3 9 a	23	13	8	10	scor	13	10	f	20	e
21	d	Terme ends	23	9	8	10		27	11	g	21	f
22	e	Δ h 5 a	23	5	8	9	sagit	10	12	a	22	g
23	f	Δ 2 5 a	23	0	8	9		24	13	b	23	a
24	g	John Baptist	22	54	8	8	capri	7	14	c	24	b
25	A	4 Sun. af. Trin	22	49	8	7		21	15	d	25	c
26	b	vac. cur.	22	43	8	6	aquar	3	16	e	26	d
27	c	Δ h 3 a	22	36	8	6		16	17	f	27	e
28	d	Δ 2 noon.	22	29	8	5		23	18	g	28	f
29	e	Peter Apoc.	22	22	8	4	mic	10	19	a	29	g
30	f	Δ 0 4 a	22	15	8	3		23	20	b	30	a

July hath xxxi. dayes.

morning.
 ing.
 the after
 none.

Last quarter the 2 day 13 min. past 9 afternoone.
 New moone the 10 day 13 min. past 10 in the morn.
 First quarter the 17 day 18 min. past 10 in the morn.
 Full moone the 24 day at 11 a clock in the morning.

20	a	1	g	Visit Mary	22	7	8	2	aries	4	21	c	11
21	b	12	A	3 Sun. aft. Tri	21	58	8	1		16	22	d	12
22	c	13	b	Martin	21	49	8	0		28	23	e	13
23	d	14	c	Δ 4 □ 5 D 7 a	21	40	7	59	taur	10	24	f	14
24	e	15	d	* ○ 2 p	21	31	7	58		22	25	g	15
25	f	16	e	□ 4 2 s p	21	21	7	56	gem	5	26	a	16
26	g	17	f	♂ h 1 morn.	21	11	7	56		18	27	b	17
27	a	18	g	* 4 6 morn.	21	0	7	55	cancer	1	28	c	18
28	b	19	A	8 Sun. aft. Tri	20	49	7	54		15	29	d	19
29	c	20	b	♂ ○ 11 a	20	38	7	53		29	30	e	20
1	d	21	e	* h D noone	20	26	7	51	leo	13	1	f	21
2	e	22	b	♂ 5 D 2 a	20	14	7	50		28	2	g	22
3	f	23	e	□ h D 2 p	20	2	7	48	virg.	12	3	a	23
4	g	24	f	□ 8 D 5 a	19	49	7	47		27	4	b	24
5	a	25	g	Swirhen.	19	36	7	46	libra	11	5	c	25
6	b	26	A	7 Sun. aft. Tri	19	23	7	44		26	6	d	26
7	c	27	b	* 4 D noone	19	9	7	43	scor	10	7	e	27
8	d	28	c	Δ 5 D 8 a	18	55	7	41		23	8	f	28
9	e	29	d	Long daies beg.	18	41	7	40	sagit	7	9	g	29
10	f	30	e	Margarer.	18	26	7	38		20	10	a	30
11	g	31	f	Δ 5 D 2 p	18	12	7	37	capri	3	11	b	31
12	a	1	g	Magdalen.	17	56	7	35		16	12	c	1
13	b	2	A	8 Sun. aft. Tri	17	41	7	34		29	13	d	2
14	c	3	b	Δ h 4 p	17	25	7	32	aqua	12	14	e	3
15	d	4	c	James Apostle	17	5	7	30		24	15	f	4
16	e	5	d	Anne	16	53	7	29	pisces	7	16	g	5
17	f	6	e	♂ 4 11 a	16	36	7	27		19	17	a	6
18	g	7	f	□ 8 3 p	16	19	7	26	aries	1	18	b	7
19	a	8	g	* h 5 p	16	2	7	24		12	19	c	8
20	b	9	A	9 Sun. aft. Tri	15	45	7	22		24	20	d	9
21	c	10	b	□ 5 4 p	15	27	7	21	taur	6	21	e	10

August hath xxxi. dayes.

- ☾ Last quarter the 1 day 55 min. past 1 in the aftern.
- ☾ New moone the 8 day 43 min. past 6 afternoons.
- ☽ First quarter the 15 day halfe an houre past 9 morn.
- ☽ Full moone the 23 day 36 min. past 1 in the morn.
- ☾ Last quarter the 30 day 1 quarter past 4. morning.

1	c	Lamas day	15	9	7	19	taur	19	☾	22	f	11
2	b	☾ vac. cur.	14	51	7	17	gem	1		23	g	12
3	e	☐ ☿ ☾ 5 p	14	33	7	16		13		24	a	13
4	f	* ☉ ☾ 5 a	14	14	7	14		25		25	b	14
5	g	Gowri. Consp.	13	55	7	12	can	9		26	c	15
6	a	☽ Sun. af. Tri.	13	36	7	10		23		27	d	16
7	b	☾ vac. cur.	13	17	7	9	leo	7		28	e	17
8	c	☿ ☽ ☾ 5 a	12	58	7	7		22	●	29	f	18
9	d	* ☽ ☾ 4 p	12	38	7	5	virgo	7		1	g	19
10	e	Laurence. m.	12	18	7	3		22		2	a	20
11	f	☐ ☽ ☾ 7 p	11	58	7	1	libra	7		3	b	21
12	g	☐ ☽ ☾ 3 a	11	38	7	0		22		4	c	22
13	a	☽ Sun. af. Tri.	11	17	6	58	scorp	6		5	d	23
14	b	* ☽ ☾ 5 a	10	57	6	56		20		6	e	24
15	c	☐ ☽ ☾ 10 p	10	36	6	54	sagit	4		7	f	25
16	d	☽ ☽ ☾ 8 a	10	15	6	52		17		8	g	26
17	e	☐ ☽ ☾ 7 a	9	54	6	50	capri	0		9	a	27
18	f	☽ ☽ ☾ 2 p	9	32	6	48		13		10	b	28
19	g	☽ ☉ ☽ 3 a	9	11	6	46		26		11	c	29
20	a	☽ Sun. af. Tri.	8	49	6	44	aqua	8		12	d	30
21	b	☐ ☽ ☾ 2 a	8	28	6	42		21		13	e	31
22	c	☽ ☽ ☾ 3 a	8	6	6	41	pisces	3		14	f	
23	d	☽ ☽ ☾ 6 p	7	44	6	39		15	●	15	g	
24	e	Barthol. Apost.	7	22	6	37		27	AR	16	a	
25	f	☾ vac. cur.	6	59	6	35	aries	9		17	b	
26	g	Dog dayes end	6	37	6	33		21		18	c	
27	a	☽ Sun. af. Tri.	6	14	6	31	taur	3		19	d	
28	b	☐ ☽ ☾ 10 p	5	52	6	29		15		20	e	
29	c	John behead.	5	29	6	27		27		21	f	
30	d	☐ ☽ ☾ 1 a	5	6	6	26	gem	9		22	g	
31	e	☽ ☽ ☾ 3 a	4	43	6	21		21	☾	23	a	

September hath xxx. dayes.

- New moone the 7 day 49 min. past 2 in the morn.
- First quarter the 13 day 1 quarter past 7 afternoone.
- Full moon the 21 day at 6 a clock afternoone.
- Last quarter the 29 day 43 min. past 6 afternoone.

1	f	Giles Ahtor	4	21	6	22	can	4	24	b	11
2	g	♂♂ midnig.	3	57	6	20		17	25	c	12
3	a	14 Sun. at Tri.	3	32	6	18	leo	1	26	d	13
4	b	* h ♂ 1 p	3	11	6	16		15	27	e	14
5	c	♂♀ ♂ 9 p	2	48	6	14	virgo	0	28	f	15
6	d	♂♂ ♂ 9 p	2	25	6	12		15	29	g	16
7	e	knur. Bisl. cp	2	28	6	10		30	30	a	17
8	f	Nat Mary vir.	1	38	6	8	libra	15	1	b	14
9	g	□♂♂ 11 a	1	15	6	6		30	2	c	19
10	a	15 Sun. at Tri.	0	51	6	4	scor	15	3	d	20
11	b	Δ♂♂ 1 p	0	28	6	2		50	4	e	21
12	c	♂♂♂ 5 p	Nor. 4	6	0	sagit	14		5	f	22
13	d	□♀♂ 10 p	Sou. 20	5	58		27		6	g	23
14	e	Holy croce	0	43	5	56	capri	10	7	a	24
15	f	Δ♂♂ 11 a	1	7	5	54		23	8	b	25
16	g	c ♂♂ 6 a	1	30	5	52	aqua	5	9	c	26
17	a	16 Sun. at Tri.	1	54	5	50		18	0	d	27
18	b	♂ vac. cur.	2	17	5	48	pisces	0	11	e	28
19	c	□♂♂ 8 p	2	41	5	46		12	12	f	29
20	d	♂♂♂ 11 a	3	4	5	44		24	13	g	30
21	e	Mar. Apost.	3	28	5	42	aries	6	14	a	1
22	f	Δ♂♂ moone	3	51	5	40		18	15	b	2
23	g	♂ vac. cur.	4	14	5	38		30	16	c	3
24	a	17 Sun. at Tri.	4	37	5	36	taur	12	17	d	4
25	b	Δ♂♂ 4 p	5	1	5	34		24	18	e	5
26	c	Cyprian Mar	5	24	5	32	gem	6	19	f	6
27	d	♂♂♂ 11 a	5	47	5	30		18	20	g	7
28	e	□♂♂ 4 a	6	10	5	28	cancer	0	21	a	8
29	f	Micha. Arch	6	33	5	26		18	22	b	9
30	g	Hiernimus	6	56	5	24		26	23	c	10

October hath xxxj. dayes.

- New moone the 6 day 22 min. past 11. in the morning
- First quarter the 13 day halfe an houre past 8 morning
- Full moone the 21 day 4 min. before noone.
- Last quarter the 29 day 8 min. past 6 in the morning

1	A	18 Sun. at 12i	7	19	5	22	leo	10	24	11
2	b	* ♀ 3 p	7	41	5	20		24	25	12
3	c	□ h 1 midnig.	8	4	5	18	virgo	8	26	13
4	d	♂ ♀ 5 p	8	26	5	16		23	27	14
5	e	* ♂ 9 p	8	49	5	14	libra	8	28	15
6	f	Faith	9	11	5	12		24	29	16
7	g	♂ ♀ 1 a	9	33	5	11	scorp	9	30	17
8	A	19 Sun. at 12i	9	55	5	9		24	31	18
9	b	Termine begin	10	17	5	7	sagit	8	3	19
10	c	♂ h 2 a	10	39	5	5		22	4	20
11	d	* ♀ 3 p	11	0	5	3	capri	6	5	21
12	e	vac. cur.	11	21	5	1		19	6	22
13	f	Edward	11	42	4	59	aqua	2	7	23
14	g	♂ ♂ 8 p	12	4	4	57		15	8	24
15	A	20 Sun. at 12i	12	24	4	55		26	9	25
16	b	□ h 1 midnig	12	45	4	53	pisces	9	10	26
17	c	Erheldred	13	4	4	52		21	11	27
18	d	Luke Evang.	13	25	4	50	aries	3	12	28
19	e	Frideswid vir.	13	45	4	48		15	13	29
20	f	Δ ♂ 2 a	14	5	4	46		27	14	30
21	g	♂ ♂ noone	14	25	4	44	taur	9	15	31
22	A	21 Sun. at 12i	14	44	4	43		21	16	
23	b	Δ * 9 a	15	3	4	41	gem	3	17	
24	c	♂ h 2 p	15	22	4	39		15	18	
25	d	Crispine	15	40	4	37		27	19	
26	e	Δ ○ 7 p	15	59	4	35	can	10	20	
27	f	Δ ♀ 10 p	16	17	4	34		23	21	
28	g	Simon & Jude	16	34	4	32	leo	6	22	
29	A	22 Sun. at 12i	16	52	4	30		20	23	
30	b	♂ ♂ 1 a	17	9	4	28	virgo	3	24	
31	c	□ h 7 a	17	26	4	26		18	25	

November hath xxx dayes.

New moone the 4 day 37. min. past 7. afternoone.
 First quarter the 12 day 41 min. past 1 in the morn.
 Full moone the 20 day neere 6 in the morning.
 Last quarter the 27 day 49 min. past 3 in the aftern.

17	45	25	libra	2	20	g	11
17	59	4	23	17	27	a	12
18	15	4	22	scorp	2	b	13
18	31	4	20	17	29	c	14
18	46	4	19	sagit	2	d	15
19	14	17	17	17	2	e	16
19	16	4	16	capri	4	f	17
19	50	4	14	14	4	g	18
19	44	4	13	28	5	a	19
19	58	4	12	aqua	11	b	20
20	11	4	10	23	7	c	21
20	23	4	9	pisces	6	d	22
20	36	4	7	18	8	e	23
20	48	4	6	30	9	f	24
21	0	4	5	aries	11	g	25
21	11	4	4	23	10	a	26
21	22	4	3	taur	5	b	27
21	32	4	1	17	11	c	28
21	42	4	0	29	12	d	29
21	52	3	59	gem	12	e	30
22	1	3	58	20	13	f	31
22	10	3	57	cancer	7	g	1
22	19	3	56	50	18	a	2
22	27	3	55	leo	3	b	3
22	34	3	54	17	19	c	4
22	41	3	53	30	20	d	5
22	48	3	52	virgo	12	e	6
22	54	3	51	28	21	f	7
22	59	3	51	libra	12	g	8
23	5	3	51	27	22	a	9
					23	b	10

December hath xxxj. dayes.

- New Moone the 4 day 11 min. past 9 in the morn.
 ● First quarter the 11 day at 10 a clock afternoone.
 ● Full moon the 19 day 56 min. past 10 in the morn.
 ● Last quarter the 26 day a litle after midnight.

1	f	* h C 11 a	23	9	3	50	scor	11	17	b
2	g	o h q morne	23	14	3	50		26	18	b
3	A	Adverx Sund.	23	18	3	49	sagit	10	19	-
4	b	Barbara	23	21	3	49		25	30	e
5	c	□ 4 D 10 a	23	24	3	49	capri	9	1	f
6	d	Nicholas	23	26	3	49		22	2	g
7	e	Δ 4 D 4 p	23	28	3	48	aqua	6	3	a
8	f	Concep. Mary	23	30	3	48		19	4	b
9	g	o o q 2 a	23	31	3	48	pisces	1	5	c
10	A	2 Sund. in Adv.	23	31	3	48		14	6	T
11	b	* q D 10 a	23	31	3	48	Tropi. capri	26	7	-
12	c	o 4 D 1 p	23	31	3	48	aries	8	8	f
13	d	Lucie Virgin.	23	30	3	48		19	9	g
14	e	□ q D 4 a	23	29	3	48	taurus	1	10	a
15	f	Δ o D 2 p	23	27	3	48		13	11	S
16	g	O Sapientia	23	25	3	49		25	12	Jo
17	A	3 Sund. in Adv.	23	21	3	49	gem	8	13	Ar
18	b	o q D 3 p	23	19	3	49		20	14	f
19	c	□ 4 D 10 p	23	15	3	50	cancer	3	15	g
20	d	* o C noon	23	11	3	50		16	16	a
21	e	Tho. Apostle	23	6	3	51		29	17	f
22	f	o q C 3 a	23	1	3	52	leo	13	18	g
23	g	Δ q C 6 a	22	55	3	52		27	19	D
24	A	4 Sund. in Adv.	22	49	3	53	virgo	11	20	e
25	b	Christ. Nati.	22	43	3	53		25	21	f
26	c	Stephen Prot.	22	36	3	54	libra	9	22	g
27	d	John Evang.	22	28	3	54		23	23	T
28	e	Innocents.	22	21	3	55	scorp	7	24	a
29	f	* o C 5 a	22	12	3	56		21	25	b
30	g	o h C 7 p	22	4	3	57	sagit	5	26	c
31	A	ilvester.	21	54	3	58		10	27	-

STAYNRED

A

PROGNOSTICATION

for the year of our Re-
demption 1648.

Being Bissextile or Leap-year.

Containing a brief Description
of the four quarters of the year.

Together with many necessary
TABLES &c.

LONDON,

Printed by J. M. for the Company of
STATIONERS 1648.

NOTATION

of the following

8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100

respect to the

of the

of the

of the

of the

of the

of the

of the

T

degree

are all

to agan

The

degree

1600

tanou

usual

degree

rence

But

of the

41 1/2

So

declin

From

Meri

come

The

Th

1833

2334

Bu

Rich

69 1/2

wher

Staynred 1648.

g^e Geographical Notes.

THe Meridian, Equinoctial, or any other great Circle, contains 360 degrees, which is the whole Circumference of the earth; each degree is divided into 60 parts, called minutes, those are also subdivided into 60 parts, called seconds; and so again divided into thirds, fourths fifts, &c.

The vulgar way hath been to allow 60 miles to one degree, and so the whole Circumference of the Earth 21600 miles; But comparing the observations of that famous Geographer *wth Snellius* with our measures usual in *England*, we shal find 66 $\frac{2}{3}$ miles to one degree of a great Circle, and the whole Circumference of the Earth 24000 miles.

But in the parallel of *Bristol* the Circumference of the Earth is 14951 miles, and there are near 41 $\frac{1}{3}$ miles answering to one degree of longitude.

So according to the greatest obliquity, or Suns declination 23 degrees 31 minutes, you shal have

		miles.
	North pole	2569
	Artick circle	1001
From <i>Bristol</i> under the Meridian until you come under the	Tropic \odot	1863
	Equinoctial	3431
	Tropic of φ	4999
	Antarctick cir.	7863
	South pole	9431

The Semidiameter of the Earth is 3820

The upper part, or Superficial content, contains 183346494 square miles, and in Cubical miles 233443907161.

But according to an Experiment made by Mr *Richard Norwood* Anno 1635. there was found 69 $\frac{1}{2}$ miles in one degree of a great Circle, from whence the whole Circumference is 25036 m.

A Table of the Longitude and Latitude of 32 principal Cities, with their longest day and distance in miles from the City of Bristol, reckoning 66 $\frac{1}{2}$ miles to one degree.

<i>Names of the Cities</i>	<i>Longi. de.m.</i>	<i>Latit. de.m.</i>	<i>Lo.da ho.m.</i>	<i>dist. miles</i>
<i>Alexandria in Egypt</i>	60,30	30,58	14, 1	2434
<i>Amsterdam in Holland</i>	26,30	52,20	16,35	310
<i>Antioch in Syria</i>	74,45	37,00	14,33	2749
<i>Antwerp in Brabant</i>	26, 0	51,16	16,23	286
<i>Babylon in Caldea</i>	73,30	35, 0	14,22	2781
<i>Burgis in Flanders</i>	24,45	51,19	16,23	233
<i>Cassell in Hessen land</i>	30,30	51,19	16,23	471
<i>Comimbria in Portugal</i>	10,45	40, 0	14,51	857
<i>Constantinople in Gre.</i>	56,30	43,10	15,13	1759
<i>Cracow in Poland</i>	46,30	50,12	16,12	1147
<i>Dublin in Ireland</i>	14,30	53, 4	16,43	211
<i>Dugsburg in Cliveland</i>	28, 0	51,48	16,29	367
<i>Edenburg in Scotland</i>	19, 0	55,42	17,17	281
<i>Eraburg in Prussia</i>	46, 0	54,19	16,58	1089
<i>Francfort ad Oderam</i>	36,30	52,10	16,33	714
<i>Fanker in Friesland</i>	27,15	53,10	16,44	344
<i>Gaunt in Flanders</i>	25,30	51, 8	16,22	261
<i>Gratz in Stiria</i>	39,15	47, 2	15,43	914
<i>Hicrusalem in Palast.</i>	67,30	32, 0	14, 6	2667
<i>LONDON in England</i>	21,30	51 32	16 26	98
<i>Middlburg in Zealand</i>	25,45	51,31	16,26	273
<i>Norimberg in Germany</i>	33,45	49,24	16, 4	636
<i>Prague in Bohemia</i>	36,30	50, 6	16,11	731
<i>Rome in Italy</i>	36,15	42, 4	15, 5	996
<i>Rhodes in Meditera.</i>	58, 0	36, 0	14,27	2101
<i>Strigonium in Huhgar.</i>	14,45	47, 8	51,44	1017
<i>Ter Gous in Zealand</i>	25,30	51 31	16,26	261
<i>Torg in Misnia</i>	35, 0	51,30	16,26	656
<i>Tubing in Sweveland</i>	31, 0	48,24	15,55	547
<i>Venice in Italy</i>	35,15	45, 0	15,26	833
<i>Vienna in Austria</i>	39, 0	48,23	15,55	874
<i>Vraniburg in Denmark</i>	32,45	55,54	17,20	611

Staynred 1648.

A brief description of the 4 quarters this
year 1648.

☉ in ♍, ♎, and ♏

1. *Solstitium Hyemale*, or the beginning of our Winter quarter, according to Astronomical computation, was the last year the 11 of December 12 minutes past 8 of the Clock afternoon, and this year the 11 day of December 1 min. past 2 in the morning, at what time the Sun enters into the first minute of ♍ *Capricorn*.

This Tropical time makes the shortest day and longest night in the year; The day being in length but 7 hours 35 minutes from Sun rising to setting; The night being then 16 hours 25 minutes from ☉ setting to ☉ rising.

The Suns Amplitude at rising is 39 degrees 50 mi. from the East Southerly, which is almost within $\frac{1}{4}$ a point of the South-East and his setting almost within $\frac{1}{4}$ a point of S. W.

This Winter quarter continueth until the ☉ hath finished his course through the three Celestial signes, *Capricorn*, *Aquarius* and *Pisces*; which space of time will be in 89 days 0 hou. 18 min.

☉ in ♈, ♉, and ♊

2. *Aequinoctium Vernal*, or our Spring quarter, beginneth Astronomically, when the Sun comes into the first minute of ♈ *Aries*, which this year will be upon the 9 day of March half an ho. past 8 afternoon

This entrance of the ☉ into the Equinoctial point makes the day equal with the night consisting of 12 hours, the Suns rising that day being on the East-point, and sets on the West.

The continuation of this pleasant quarter will be until the ☉ hath put through the three Celestial signs *Aries*, *Taurus* and *Gemini*, wherein it will stay the space of 93 days 3 hours and 42 minutes.

Stayned 1648.

☉ in ♋, ♌ and ♍

3. *Solstitium Æstiuum*, or the Summer quarter, begins when the ☉ enters into the Tropick of Cancer which will be on the 10 day of June, 12 m. past midday.

This will be the longest day in the year (*viz*) 19 hours 23 minutes, and the shortest night in the year (*viz*) 7 hours 35 minutes.

The ☉ Amplitude at rising is 39 degr. 50 minutes from the East Northerly which is almost within $\frac{1}{2}$ a point of the North-East at his rising, and within $\frac{1}{2}$ a point of North-West at his setting.

The ☉ altitude due E or W. is 30 degrees 38 minutes being on the East point 21 m past 7 a Clock, & on the West point 39 m past 4 of the Clock.

And at 6 of the Clock after-noon the ☉ will be 10 deg. 9 min from the South, which is W. b. N. $\frac{1}{2}$ of a point Northerly, and in altitude 18 deg. 11 min.

This Summer quarter will continue so long as the ☉ is in Cancer, Leo, and Virgo, which lasteth 39 days, 19 hours and 38 minutes.

☉ in ♏, ♐ and ♑

4. *Autumnal Æquinoctial*, or Harvest quarter according to Astronomical rules, begins when the Sun proceeds in the first minute of the second Equinoctial point ♏ *Libra*, which will fall this year on the 12 day of September, 50 minutes past 2 after-noon, making the day and night equal as in *Æquinoctium Vernal*.

In this quarter the Sun must go through the three Celestial Signes *Libra*, *Scorpio* and *Sagittarius* which progress will require 89 da. 11. hou. 11. min.

By these last rules you may know the whole progression of the Sun in the 12 Signs of the Zodiac for if the continuance of the four quarters of the year be added together, the Sun will make 365 days 5 hours and 49 minutes for the length of the Tropical year.

Also by this you shall find, that if the Spring and Summer quarters be added together, you shall find

days 18 hours and 20 minutes for the length of the Summer season; and so long time *Sol* continueth in the Northerly Semicircle of the Ecliptick. So likewise for the Winter and Harvest continuance, you may find but 178 days 11 hours and 29 minutes, which (viz.) if you subtract from the Summer season 186 days 10 hours and 20 minutes, the remainder will be 8 days 11 hours and 51 min. and so much the Summer season longer then the Winter season. Thus you find the difference to stay 8 days 6 hours 51 minutes longer in the Northerly Signs (viz.) Υ φ Π Θ Ω and γ then in the 6 Southerly Signs (viz.) ϵ \cap ζ ν μ and κ . The true half year being 182 days 14 hours and 54½ minutes which is less then the Summer, and more then the Winter by 4 da. 3 ho. & 25½ m.

Eclipses this year 1648.

There will be 4 Eclipses this year, (viz.) two of the ☉ and two of the ☾. The first is of the ☉ the 26 day of May about noon, not to be seen in Bristol, but by our Antipodes, being then ½ part eclipsed, continuing above 1 hour.

The second is of the ☉ the 10. day of June, a little after Midnight, and will not be in our Horizon, but with them in Tartaria, the Kingdom of China, &c. it will be a great Eclipse, covering the whole body of the Sun continuing neer 2½ hours.

The third is again of Luna, on the 20 day of November, and may be seen in Bristol if the Air be clear.

The { Beginning is 29 minutes past 4 }
 { Middest is 3 minutes past 6 } in the Mor.
 { Ending is 36 minutes past 7 }

The continuance is 3 hou. 7 m Eclipsed 3 quarters.

The fourth and last Eclipse is again of the Sun, being on the 4 day of December, about 9 a Clock in the Morning, best to be seen of those people that liveth South of the Equinoctial line, this will be almost a total Eclipse, and will continue for the space of 2 hou. and a quarter.

Stationed 1648.

A compendious table for day-break &c.

The Suns Declin.	Declination.	
	Nor.	Sou.
	d.br.	d.br.
	h.m.	h.m.
0	4,22	4,22
1	4,16	4,27
2	4,11	4,33
3	4, 5	4,38
4	3,59	4,43
5	3,53	4,48
6	3,47	4,58
7	3,40	4,59
8	3,34	5, 4
9	3,27	5, 9
10	3,20	5,14
11	3,13	5,20
12	3, 5	5,25
13	2,56	5,30
14	2,48	5,35
15	2,40	5,40
16	2,31	5,45
17	2,20	5,49
18	2, 9	5,54
19	1,57	5,59
20	1,43	6, 4
21	1,26	6, 9
22	1, 5	6,14
23	0,40	6,19
24	cont.	6,21
25	day.	

THis Table is calculated for the Sun's depression 15 degrees under the Horizon, because that then the Stars of the mean Magnitude appears not to our sight.

The use.

Seek for the Sun's declination in the first Columnne and right against it in the second Columnne you have the hour and minute of day break, when the ☉ hath North declination, as in the Summer season; and in the third Columnne you have day break for South declination, as in the Winter time.

Example, the 20 day of April the Sun's declination is neer 15 degrees North; against which, in the second Columnne of this Table, you have 2 hours and 40 minutes for day break.

Again for the 29 day of January you have neer 15 degrees South declination, against which, in the third Columnne of this Table, you have 5 h. and 40 m. for day break.

And for twy-light, subtract day breaking from 12 hours.

Note, that if the Sun's declination be not even degrees, that then you must take the neereft in this Table, or else work by the rule of proportion, or rule of 3.

Inch Bung Head

A brief table for gauging of Wine or Oyl &c.

10	23	11
11	27	14
12	33	16
13	38	19
14	44	22
15	51	26
16	58	29
17	66	33
18	73	37
19	82	41
20	91	45
21	100	50
22	110	55
23	120	60
24	131	65
25	141	71
26	153	77
27	165	83
28	178	89
29	191	95
30	204	102
31	218	109
32	232	116
33	247	123
34	262	131
35	278	139
36	294	147
37	310	155
38	327	164
39	345	172
40	363	181
41	381	191
42	400	200
43	419	210
44	439	219
45	459	230
46	480	240
47	501	250
48	522	261

THE first Columne contains the Diameter, or depth of the Bung or Head in inches; The second Col. contains the Gauge number at the Bung, and the third Columne is for the Gauge number at the head.

use.

Suppose you have a Vessel to measure, whose depth at the Bung you find 23 inches, and at the head 31 inches, then do I look in the first Col. of this Table for 23 inches, against which in the second Table I find 120 which is the gauge number for the Bung, also against 31 inches I find in the third Columne 50 the gauge number for the head, both these added together makes 170. Now supposing the length to be 25 inches from head to head, I multiply the same in 170; the product wil be 4250 which if you divide by 100 or cut off two places towards the right hand as thus 42 50 you shal have 42 gallons and 50 cent. which is just half a gallon, and so much the Vessel contains in Wine or Oyl.

If you would know how many Ale gallons it wil hold, then multiply 42¹/₂ by 28 and divide the product which is 1190 by 33 the quotient wil shew you that it contains 26²/₃ gallons of Ale or Beer.

Stayned 1648.

A Table of the complement of the Suns right
Ascension to 360 degrees.

Dayes,	Jan. h.m.	Feb. h.m.	Marc. ho.m.	April. ho.m.	May. ho.m.	June. ho.m.
1	4.29	2.21	0.30	22.37	20.45	18.40
2	4.25	2.16	0.26	22.34	20.41	18.36
3	4.21	2.12	0.23	22.30	20.37	18.31
4	4.16	2. 8	0.19	22.26	20.33	18.27
5	4.11	2. 4	0.16	22.22	20.29	18.23
6	4. 7	2. 0	0.13	22.19	20.26	18.19
7	4. 3	1.56	0. 9	22.15	20.22	18.17
8	3.59	1.53	0. 5	22.11	20.18	18.10
9	3.54	1.49	0. 2	22. 8	20.14	18. 6
10	3.50	1.45	23.58	22. 4	20.10	18. 2
11	3.46	1.41	23.54	22. 0	20. 6	17.58
12	3.42	1.37	23.50	21.57	20. 2	17.54
13	3.37	1.33	23.46	21.53	19.58	17.50
14	3.33	1.30	23.43	21.49	19.54	17.46
15	3.30	1.26	23.39	21.46	19.50	17.42
16	3.25	1.22	23.35	21.42	19.45	17.37
17	3.21	1.18	23.32	21.38	19.41	17.33
18	3.16	1.15	23.28	21.34	19.37	17.29
19	3.12	1.11	23.24	21.31	19.33	17.25
20	3. 8	1. 7	23.21	21.27	19.29	17.21
21	3. 4	1. 3	23.17	21.23	19.25	17.17
22	3. 0	1. 0	23.14	21.19	19.21	17.13
23	2.56	0.56	23.10	21.16	19.17	17. 9
24	2.52	0.52	23. 7	21.12	19.13	17. 5
25	2.48	0.49	23. 3	21. 8	19. 9	17. 1
26	2.44	0.45	22.59	21. 4	19. 4	16.56
27	2.40	0.42	22.56	21. 0	19. 0	16.52
28	2.36	0.38	22.52	20.57	18.56	16.48
29	2.32	0.34	22.49	20.53	18.52	16.44
30	2.28	—	22.45	20.49	18.48	16.40
31	2.24	—	22.41	—	18.44	—

Staynerd 1648.

Table of the complement of the Suns right
Ascension to 360 degrees.

June. ho m.	July. ho m.	Augu. ho. m.	Sept. ho. m.	Octob. ho. m.	Nov. h. m.	Dec. h. m.
18.49	1 16 36	14 34	12 40	10 50	8 51	6 43
18.36	2 16 32	14 30	12 37	10 47	8 47	6 39
18.31	3 16 28	14 27	12 33	10 43	8 43	6 34
18.27	4 16 24	14 23	12 30	10 40	8 39	6 30
18.23	5 16 20	14 19	12 26	10 36	8 35	6 25
18.19	6 16 16	14 15	12 22	10 32	8 30	6 21
18.17	7 16 12	14 11	12 19	10 29	8 26	6 16
18.10	8 16 8	14 8	12 15	10 25	8 22	6 12
18. 6	9 16 4	14 4	12 12	10 22	8 18	6 7
18. 2	10 16 0	14 0	12 8	10 18	8 14	6 3
17.58	11 15 56	13 56	12 4	10 14	8 11	5 59
17.54	12 15 52	13 53	12 1	10 10	8 5	5 54
17.50	13 15 48	13 49	11 57	10 6	8 1	5 50
17.46	14 15 44	13 45	11 53	10 2	7 57	5 45
17.42	15 15 40	13 41	11 49	9 59	7 53	5 41
17.37	16 15 36	13 38	11 46	9 55	7 48	5 37
17.33	17 15 32	13 34	11 42	9 51	7 44	5 32
17.29	18 15 28	13 30	11 38	9 47	7 40	5 28
17.25	19 15 24	13 27	11 35	9 43	7 35	5 23
17.21	20 15 20	13 23	11 31	9 39	7 31	5 19
17.17	21 15 16	13 19	11 27	9 35	7 27	5 15
17. 9	22 15 12	13 16	11 24	9 31	7 22	5 10
17. 5	23 15 8	13 12	11 20	9 27	7 18	5 6
17. 1	24 15 4	13 9	11 16	9 23	7 14	5 1
16.56	25 15 0	13 5	11 13	9 19	7 9	4 57
16.52	26 14 57	13 1	11 9	9 16	7 5	4 53
16.48	27 14 53	12 58	11 5	9 12	7 1	4 48
16.44	28 14 49	12 54	11 1	9 8	6 59	4 44
16.40	29 14 45	12 51	10 58	9 4	6 52	4 39
16. 0	30 14 41	12 47	10 54	9 0	6 48	4 35
16. 0	31 14 38	12 44	—	8 55	—	4 31

**A Table of the right Ascensions, Declinations
and Magnitudes of 32 principal Stars with
their Meridian Altitudes in Bristol**

<i>Names of the Stars.</i>	<i>ri asc.</i>	<i>declin.</i>	<i>D. M. r.</i>	<i>altit.</i>
	<i>ho. m.</i>	<i>de. m.</i>		
The Whales tail	0, 26	19, 55	S	18, 37
The North Star	0, 31	87, 25	N	54, 2
The head of { the Ramme	1, 48	21, 48	N	60, 20
{ Medusa	2, 46	39, 35	N	78, 7
The 7 Stars brightest	3, 27	23, 0	N	61, 32
The Bulls eye	4, 16	15, 46	N	54, 10
The Goat	4, 51	45, 35	N	84, 7
Orions { left foot	4, 58	8, 38	S	29, 10
{ left shoulder	5, 7	5, 59	N	44, 31
In Orions girdle the	5, 15	0, 35	S	37, 57
	5, 19	1, 27	S	37, 8
	5, 23	2, 9	S	26, 23
Orions right shoulder	5, 35	7, 18	N	45, 19
The Great Dog	6, 30	16, 13	S	22, 19
Castor	7, 12	32, 47	N	71, 19
The Little Dog	7, 21	6, 6	N	44, 38
Pollux	7, 24	28, 49	N	67, 11
The heart of Hydra	9, 11	7, 10	S	31, 22
The Lyons { heart	9, 50	13, 39	N	52, 11
{ tail	11, 31	16, 32	N	55, 4
Virgins Spike	13, 7	9, 17	S	29, 15
Arcturus	14, 0	21, 4	N	59, 37
South Ballance	14, 32	14, 32	S	24, 0
Foremost Guard	14, 52	75, 40	N	65, 48
The North Crown	15, 20	27, 55	N	66, 27
The Scorpions heart	16, 8	25, 34	S	12, 58
The Harp	18, 25	38, 30	N	77, 2
The Vultures { tail	18, 50	13, 24	N	51, 56
{ heart	19, 34	8, 1	N	46, 33
The Swans tail	20, 30	44, 4	N	82, 36
Tomahant	22, 38	31, 22	S	7, 19
Andromedas head	23, 51	27, 11	N	6, 11

Staynred 1648.

¶ The use of the two former
Tables.

The first table sheweth the complement of the ☉ right ascension to a whole Circle (or 360 degrees.) the first Col. you have the day of the Moneth, and the rest is for the Moneths according to the title: &c. And to get the ☉ right ascension by this table, you must substract the hour and minutes there found from the hours, as for Example, the first day of May you have 10 hours 45 min. which being substracted from 24 hours 00 min. the remainder 13 hours 15 m. is the ☉ right ascension.

The second Table sheweth the right Ascensions, Declinations, Magnitudes &c. of 32 Stars, by which you may know at what hour any of them will be due South.

Example

The 15 day of January I would know what hour the Sun will be due South, If you look in the first Table right against the 15 day of January you shal find 10 ho. 33 min. and in the second you shal find the Great Dogs right ascension 6 ho. 30 m. both being added together make 16 ho. 30 m. so I say the great Dog will be due South at 16 a clock afternoone or at night.

Again the 6 day of November you have for the Sun 16 ho. 30 m. and the Dog Stars right ascension as before 6 ho. 30 m. which added together makes 23 ho. 00 m. at the Star cometh South after the ☉ from whence the 11 hours there remains 3. which sheweth at 3 of the clock in the morning.

Also the 21 day of April for the ☉ you have 21 ho. which added to 6 ho. 30 m. makes 27 ho. 30 m. the Star comes after the ☉ which is at 3 ho. 30 afternoon; So if your Sun exceeds 36 ho. then the overplus sheweth the time in the morning.

Staynred 1648.

A new Table to find the Moons coming South.

The C age.	Perig. 29 da. ho.m.	Mean 29 ¹ ho.m.	Apog. 30 da. ho.m.	This Table I have cal- culated according to Moons 3 motions from Conjunction to ☿. In first Columne you have Moons age, (vz) the ber of days after ☿ or Moon. The second Columne for the Moons coming South when she is in her Perigee or swift motion, as make but 29 days from ☿ to ☿. The third Columne her Mean motion, as 29 ¹ days. The last Columne is the Apogee or slow motion in making of 30 days from Change to Change.
1	0,50	0,49	0,48	
2	1,39	1,38	1,36	
3	2,29	2,26	2,24	
4	3,19	3,15	3,12	
5	4, 8	4, 4	4, 0	
6	4,58	4,53	4,48	
7	7,48	4,42	5,36	
8	6,37	6,31	6,24	
9	7,28	7,19	7,12	
10	8,17	8, 8	8, 0	
11	9, 6	8,57	8,48	
12	9,56	9,46	9,36	
13	10,46	10,35	10,24	
14	11,35	11,23	11,12	
15	12,25	12,12	12, 0	
16	1,15	1, 1	0,48	
17	2, 4	1,50	1,36	
18	2,54	2,39	2,24	
19	3,43	3,27	3,12	
20	4,33	4,16	4, 0	
21	5,23	5, 5	4,48	
22	6,12	5,54	5,36	
23	7, 2	6,43	6,24	
24	7,52	7,32	7,12	
25	8,41	8,20	8, 0	
26	9,31	9, 9	8,48	
27	10,21	9,58	9,36	
28	11,10	10,47	10,24	
29	12, 0	11,36	11,12	
30	12,50	12,25	12, 0	

The use.

The Moon being in
of these 3 motions, seek
age in the first Columne
and right against it in
other Columnes you have
the Moons coming South
hours and minutes, ac-
cording to her three Mo-
ons.

Staynred 1648.

Example.

The 20 day of *July* I find right against it in the 8
Columnne of the Almanack, the ☾ Moons age to
be 20 days old, and in the 7 Columnne I perceive her
to be in her mean motion (that is between her Peri-
son and Apogæon) wherefore in the third Columnne
of the mean motion (in this table) right against
the 20 days I shal find 8. 8. that is 8 hours 8 minutes, so
of the clock and 8 minutes, the ☾ Moon will be
in the Meridian, (or due South) the 20 day of *Ju-*
ly this year 1648. And because it is before the ☽ op-
position (or full of the Moon) it cometh South al-
ways in the afternoon, but if it were after the ☽ of
the Moon (as above 15 days old) then it comes on the
Meridian in the morning, so for any other.

To find the hour of the night by the ☾ shadow
on a Sun Dial.

First you are to observe upon what hour the shadow
of the ☾ strikes on the Sun Dial; which (for ex-
ample) let it be on 3 in the afternoon hours; and let
the ☾ be South as before at 8 hours 8 minutes, after-
noon; Now if you add them together you have 11
hours 8 minutes, wherefore I say it is 8 minutes past
11 of the clock at night.

But this you shal note, that if the hours exceed 12,
when you must substract 12 hours out of it.

Or for more ease, if the Sun Dial be hour'd round,
(or otherwise suppos'd) that then on the Dial you may
reckon from the shade at 3 a clock, 8 hours and 8
minutes, so you shal find as before 8 minutes past
11.

A tide Table shewing what C makes a full
and at what hour and minute in any of these
places following.

In ENGLAND.

Moon h.

Quinborow, Southampton, Portsmouth	S & N 12
Ile of Wight, Beachy, Spits, Kentishro	
Rochester, Maldon, Nowre, Blacktail	S by W 0.
Gravelend, Downs, Romney, Silly $\frac{1}{2}$ tide	S S W 1.
London, Tinnmouth, Hartlepole, Whitbay	So. W 3.
Barwick, Flambrohead, Bridlingtonbay	S W b. W 3.
Scarborow $\frac{1}{2}$, Lawrenas, Severn, Moultsb.	W S W 4.
Falmouth, Foy, Humber, Moonles }	W b S 5.
Newcastle, Dartmouth, Terbay }	
Plimouth, Weymouth, Hull, Lundy }	E & W 6.
Holmes of Bristol, Davids head }	
Bristol, Foulnes at the Start	E b S 6.
Milford, Bridgwater, Exwater }	
Landsend, Portland }	E S E 7.
Poole, S. Hellen, Man Ile, Carnes	So. E 9.
Needles, Oxford, Layston, S & N Forlands	S E b S 9.
Yarmouth, Dover, Harwich	S S E 10.
Rye, Tames, Winchelsey, Gorend	S b E 11.

In Scotland

Moon h.

Fero Islands	S & N 12
Leith, Edenburg haven	S W b W 3.
S. Magnes sound	S E b E 8.
Orkney and Fair Isles	So. E 9.
In the Frith	S S E 10.
Fair Isle Rodes	S b E 11.

In Ireland.

Moon h.

Kingsail, Corkhaven }	W S W 4.
Baltemore, Dunganum }	
Caldy	W b S 5.
Waterford, Cape-cleer, Abermorich	S S E 7.
Dublin, Lambay, Macknells Castle	S E b E 8.
Dunbar, Kildien.	S E 9.

a full
of these

Staynred 1648.

		Moon h.m.
France, Spain, Portugal &c.		
Blanket, Cherborough	S & N	12.0
Blanket, Ramkins, Semehead	S S W	1.30
St Andrews, Lisbon	}	S W b S 2 15
St Andrews, Bell Ile and Holy Ile		
Amsterdam, Gascoine	}	So. W 3. 0
Spain and Galizia		
Amsterdam, Flushing, Burdeaux, Feuntnes	S W b W	3.45
Amsterdam, Creek, Bloy, Ushantsbay 7 Isles	W S W	4.30
Amsterdam, S. Malows, Abrowrath	W b S	4.15
Amsterdam, Concalo, S. Malo	E & W	6. 0
Amsterdam, Harflew, the Hague	S E b E	8.15
Amsterdam, Island, Casquets, Deep	So. E	9. 0
Amsterdam, S. John Deluze, Calice road	S S E	10.30

The use of this Table.

By this Table you may know the time of full sea (or high-water) in any of those places which are placed in the first Columne ; The second Columne sheweth the Moon (or what point of the compass) makes a full sea in any of those places ; and the third Columne sheweth the hour and minute at the ☿ or Change day ; but any other time after the ☿ this example following will serve.

The 20 day of July I would know the time of full sea (or high-water) at Bristol.
As before shewed, the Moons coming South is at 8 hours 8 min. Now seek for Bristol in the first Columne right against it in the second you shall find an S Moon that makes full sea at Bristol ; also in the third Columne 6 hours 45 min. which being added to 8 hou. 8 minut. (which is the ☾ Southing) you have 14 hours 53 min. from which if you subtract 12 hours there remains 2 hours 53 min. which is the time of full sea (or high-water) at Bristol the 20 day of July 1648. I have found by experience that at the ☾ of ☿ that 7 a Clock is the time of full sea.

E

A

Staynred 1648.

A Table for Interest and Annuities after the rate
of 8 per centum, per annum.

Term of years.	1 Part.	2 Part.	3 Part.	4 Part.	5 Part.	6 Part.
1	10800	10000	10000	9259	9259	10800
2	11664	20800	4808	8573	17833	560
3	12597	32464	3080	7938	25771	388
4	13605	45061	2219	7350	33121	301
5	14693	58666	1705	6806	39927	250
6	15868	73359	1363	6302	46229	216
7	17138	89228	1121	5835	52064	192
8	18509	106366	940	5403	57466	174
9	19999	124876	801	5002	62469	160
10	21589	144866	690	4632	67101	149
11	23316	166455	601	4289	71390	140
12	25182	189771	527	3971	75361	132
13	27196	214953	465	3677	79038	126
14	29372	242149	413	3405	82442	121
15	31722	271521	368	3152	85595	116
16	34259	303243	330	2919	88514	113
17	37000	337502	296	2703	91216	109
18	39960	374502	267	2502	93719	106
19	43157	414463	241	2317	96036	104
20	46610	457620	219	2145	98181	101
21	50338	504229	198	1987	100168	99
22	54365	554568	180	1839	102007	98
23	58715	608933	164	1703	103711	96
24	63412	667648	150	1577	105288	95
25	68485	731059	137	1460	106748	93
26	73964	799544	125	1352	108100	92
27	79881	873508	114	1252	109352	91
28	86271	953388	104	1159	110511	90
29	93173	1039659	96	1073	111584	89
30	100627	1132831	88	994	112578	88

Staynred 1648.

The use of the table of Interest.

In the first Columne are the term of years to 30.
the rest I name the parts of the table, as the 1, 2, 3, 4, 5, and 6 part; The Questions follow.

1 *Quest.* There is 40 pounds put forth at Interest
for 17 years, after the rate of 8 per cent. per annum;
what sum will it amount unto? In the first part right
against 17 years I find 37000 which multiplied by 40
and divided by 10000 (which is the radius of the table)
you have 148 l. and so much it amounts unto.

2 *Quest.* There is 40 l. per annum to be forborn 20
years, I demand what it is worth at the 20 years end,
after the rate of 8 per cent. &c. In the second part
against 20 years I find 457620 which multiplied by
40 and divided by 10000 you have 830. 48 which is
1830 l. 9 s. 7 d. &c.

3 *Quest.* There is 50 l. to be payd at the end of 14
years, the party is willing to make over certain Land
for 14 years to make satisfaction; I would know
what yearly rent the party ought to make over, ac-
counting his money after the rate of 8 per cent. &c.
In the third part against 14 years you have 413 which
multiplied by 50 and dividing by 10000, you have
21065 which is 2 l. 1 s. 3 d. ob. &c.

4 *Quest.* There is certain Land worth at the taking
possession 500 l. I demand what it is worth 25 years
in reversion; accounting for the forbearance of the
money after 8. per cent. &c. In the fourth part against
25 years you have 1460 which multiplied by 500, di-
viding by 10000 you shal have 73 l. and so much
500 is worth for 25 years in reversion.

5 *Quest.* There is an extent on certain Lands for
the payment of 380 l. in 19 years (*viz.*) 20 l. per ann.
The owner of this Land wil discharge this extent
with readymoney, so he may be abated after the rate
of 8 per cent. per ann. The Creditor agreeth, the question
is what the owner must pay. In the fifth part against 19

years you shal have 96036, which multiplied by 20 and divided by 10000 you have 192 l. 1 s. 5 d. 19. &c.

6 *Quest.* There is a friend of mine that hath 300 l. readymoney, and is desirous to buy him an Annuity for 18 years, accounting his money after 8 l. per cent. &c. I demand the Annuity. In the 6 part you have against 18 years 1067 which multiplied by 300 and divided by 10000 the quotient wil be 32 l. 0 s. 2 d. 06. &c. for the Annuity.

7 *Quest.* 100 l. was lent on condition, to be paid 18 l. per annum; The question is how many whole payments there are and how much the last payment is to make it all equal. Multiply 100 l. by 10000 dividing the product by 18 you have 55555 which sought for in the 5 part you have 7 Years 7 $\frac{1}{4}$ Moneths: So there is 7 whole payments, and the 8 payment which is for 7 $\frac{1}{4}$ Moneths wil be 11 l. 12 s. 8 d.

Thus have I briefly expressed every part of this table; and now you shal note that the third and sixth part of the table may be omitted; for the questions that are wrought by them may also be wrought by the second and fifth part, if you use division; wherefore they are not made of necessity but only for ease, to bring the Radius into the first place, to avoyd the troublesome pains of Division.

And this table is but an Abridgment of Mr *William Purser's* 6 Table of Interest and Annuities, after the rate of 8 l. per centum, who took much pains in calculating tables of diverse rates, unto whole book I refer you for your better satisfaction, the price is but smal and method thereof is very easie.


to find the hour of the day by the shadow of the Sun &c.

Before noon		XII	I	II	III	IIII	V	VI	VII
After noon			XI	X	IX	VIII	VII	VI	V
11	June 11	53	58	73	98	134	193	305	601
6	16	53	59	73	98	134	194	306	605
1	22	54	59	74	99	135	195	309	620
26	27	55	60	75	100	137	198	316	646
21	July 2	56	62	77	102	140	202	326	687
16	7	58	64	79	104	143	208	339	748
11	13	61	66	81	107	147	215	356	834
5	18	63	69	84	110	152	224	378	962
30	23	67	72	87	114	158	234	406	1163
25	28	70	75	91	119	164	247	441	1506
20	August 3	74	80	96	124	172	262	488	2231
15	8	79	84	101	130	182	280	549	4523
10	13	84	89	106	138	192	302	634	
5	18	89	95	113	146	205	329	751	
30	23	95	101	120	155	219	362	931	
25	28	102	108	127	165	236	402	1234	
20	Sept. 3	109	116	136	176	255	454	1846	
15	8	117	124	145	189	278	521	3656	
10	13	126	133	156	204	305	612		
5	18	135	143	168	221	338	741		
28	23	145	153	181	239	376	931		
23	28	156	165	195	261	425	1252		
18	Octob. 3	168	178	211	287	485	1887		
13	8	182	192	229	316	562	3696		
8	13	196	208	249	349	662			
3	18	212	225	271	388	799			
29	23	228	243	295	433	990			
24	28	246	262	322	486	1280			
19	Nov. 2	264	282	350	546	1734			
14	7	283	304	380	615	2583			
9	12	302	325	412	691	4523			
4	17	320	345	443	777				
11	22	338	365	473	864				
16	27	352	382	500	949				
1	Dec. 1	363	395	521	1020				
6	6	371	403	534	1071				
11	11	373	405	538	1085				

Staynred 1648.

To find the hour of the day by this last

TABLE.

P Repare a Stick, Staff, or Rod, of what length you please, and divide the same into 120 equal parts. Then to find the hour of the day you must hold the rod  upright as you can, resting one end upon the ground, when the Sun shineth; then measure how many parts the length of the Suns shadow is, and knowing the day of the Moneth seek for the same (the neereſt thereto) in the first and ſecond Column, and right againſt it look for thoſe parts (or the neereſt over which in the head of the table you ſhal have the hour of the day either before-noon or elſe after noon

Example.

The 15 day of *April*, or the 8 day of *Auguſt*, I ſet the *Suns* ſhadow by my ſtaff 130 parts (which is equal to the length of my ſtaff and 30 parts over;) Now ſeek in the table right againſt the 15 day of *April* 130; the ſame you ſhal find in the 6 Column, on which in the head of the table you have IX and I which ſheweth that if it had been taken in the morning it were 9 of the clock, but if in the afternoon then it had been 3 of the Clock.

Note, that if the parts fall between, then you are to gueſs at the minutes; or elſe work by the parts proportional (or rule of 3) to find the minutes.

So for this year I am yours to make
of P. S.

FINIS.

Soli Deo gloria.

ft

ngth you
l parts
hold the
pon the
ure ha
w is, in
ame (y
oluma
need
have
er nom

ft, I
ch is on
;) No
April
ane, on
and
the m
fternoon

you are
parts p
s.
make